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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,170	12/13/2006	Young-Woo Kim	4220-127 US	1116

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EXAMINER	
LEUBECKER, JOHN P	
ART UNIT	PAPER NUMBER
3779	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,170	KIM, YOUNG-WOO	
	Examiner	Art Unit	
	John P. Leubecker	3779	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 24, 2011 has been entered.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

a) in lines 17 and 18, term "left and right binocular cameras" should be –left and right cameras—since only left and right cameras have previously been recited. Only a "binocular assembly" (which includes the left and right cameras) has previously been described as being "binocular".

b) in line 21, term "binocular camera assembly" should be --binocular assembly-- since only a "binocular assembly" has been previously recited (note line 8).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilk (U.S. Pat. 5,368,015).

Referring mainly to Figures 9, 10A and 10B, Wilk discloses a stereoscopic laparoscope apparatus comprising a stereoscopic laparoscope (Fig.10A, col.10, lines 48-49), a computer (44, Fig.1, col.5, lines 63-68) adapted to convert and store stereoscopic image information of the patient's affected part inputted via the stereoscopic laparoscope, and a monitor (46, Fig.1) used to output the stereoscopic image information converted by the computer (col.2, lines 19-36 and col.8, lines 40-50), the stereoscopic laparoscope comprising: a supporting unit (344,330, Fig.10A) including a binocular assembly (330,332a,332b) providing stereoscopic vision having a supporting rod (330) having a predetermined length and diameter; a flexible tube unit (332a,332b) including a pair of left (332a) and right (332b) flexible tubes which are driven apart and adjustable within a predetermined angle range (note distance d1 in Figures 9 and 10B) installed at the tip end of the supporting unit (Fig.10B); and a pair of left and right cameras (312,314, Fig.9) installed at the tip end of the flexible tube unit (col. 11, lines 29-32) so that they take images of the affected part in the abdominal cavity. Wilk discloses that the flexible tubes can be spaced apart using an active actuator such as a tension cable assembly (col.11, lines 21-28). Wilk clearly intends for the stereoscopic laparoscopic componentry of Figures 9-13 to be used in place of the monoscopic laparoscope (16) in Figure 1 (note col.4, lines 49-57 and col.10, lines 7-10). Thus, any actuator for driving the flexible tubes would be analogous to that exemplified by the tip bend control (36) in Figure 1, which is controlled by computer (22) via electric signals (col.5, lines 52-55). In such case, the analogous computer/switching circuit (326, Fig.10A) would anticipate a manipulator on the proximal end of the support unit and controlling

the active actuator (e.g., motor) according to electric signals. As the cameras (312,314) are actively spaced apart by the flexible tubes and movable with the entire assembly, they are adapted to take stereoscopic images from different directions and distances during laparoscopic surgery. Furthermore, the image information taken by the cameras is stored and converted by the computer so as to display three-dimensional images (col.2, lines 19-26 and col.8, lines 40-50).

Although support rod (330) includes of two split prongs (332a,332b) at the distal end, in would appear that the supporting rod (330) (connected proximally to the flexible tubes) is a single tube (note in Figure 10B that the support rod 330 appear to be bifurcated since the separation between the flexible tubes appears to stop at the proximal ends of the flexible tubes). Thus, Wilk fails to disclose that the supporting unit includes a pair of parallel left and right supporting rods. However, use of two parallel tubes in place of a single tube does not constitute inventive effort and thus does not distinguish over the prior art of record. One of ordinary skill in the mechanical arts would recognize that, without criticality, a single tube or two parallel tubes, both used for the same purpose (as a support unit for the laparoscope) and both providing the same functions (supporting the flexible tubes and containing elements such a wires) would be obvious over one another as a matter of choice in design. In addition, one would be motivated to use two separate tubes for the support unit (330) of Wilk since such would provide a simpler alternative to forming a bifurcation at the distal end of a single tube, such bifurcation requiring special techniques over simple attaching two parallel tubes together. Since Applicant provides no criticality for specifying the use of two parallel tubes over use of a single tube and one of ordinary skill would have reasons for the alternative use of a single tube and two parallel tubes as

discussed above, it would have been obvious to have used two parallel "support rods" in place of the single tube (330) in Wilk.

Response to Arguments

5. Applicant's arguments filed February 24, 2011 have been fully considered but they are not persuasive.

Regarding Applicant's contention that Wilk ('015) teaches "manual manipulation" for driving the flexible tubes (332a,332b,Fig.10B) apart, Applicant cites col.11, lines 1-28 of Wilk to support the contention. However, the Examiner finds no indication in that or any other portion of Wilk to evidence that movable parts of Wilk are done by hand. In fact, as previously pointed out, there is clear evidence that, given the fact that Wilk teaches a remote system ("remote" meaning that an operator can control such system from a remote location), driving of the flexible tubes is done via an actuator that is controlled by electric signals.

As pointed out previously, Wilk discloses a stereoscopic endoscope which produces stereoscopic images (stereoscopic vision). Applicant states that "In the present invention, the stereoscopic image is produced by each of the binocular cameras which provide stereoscopic vision" (underlining added) (page 4, lines 15-16 of the remarks filed February 24, 2011). It appears that Applicant is suggesting that each camera (82,84) of the present invention has a binocular lens system (two separate lens systems) and separately forms its own stereoscopic image (which requires two images taken at different angles). However, such structure is not supported by the specification. Instead, it takes two cameras (e.g., 82,84) to create one stereoscopic image and that is all that is disclosed.

Regarding Applicant's contention that Wilk lacks teaching of adjusting the distance between the lenses similar to convergence control of human eyes, the Examiner disagrees. Wilk specifically points out that the distance between the lenses are adjusted to simulate the intraocular distance of the operating surgeon (col.10, lines 42-47).

Regarding Applicant's arguments regarding the lack of teaching in Wilk of automatic adjustment of spacing between the cameras to take stereoscopic images from all distances, it must be pointed out that, not only will adjustment of the intraocular distance affect focusing distance, but movement of the laparoscope (e.g., forward and backward) provides images from all distances. This is an inherent ability of an endoscope that is able to be moved.

Conclusion

6. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (571) 272-4769. The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas J. Sweet can be reached on (571) 272-4761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Leubecker/
Primary Examiner
Art Unit 3779

jpl